

WHAT IS CLAIMED IS:

1. A molecular recognition type chemical CCD
comprising:

a chemical CCD having a plurality of potential wells
5 constituted to change a depth corresponding to a chemical
quantity, and being arranged two-dimensionally, in which
electric charges are injected into the potential wells and the
chemical quantity is converted into an electric charge
corresponding to the sizes of the potential wells;

10 a molecular recognition layer formed on a sensor face
of a chemical CCD, said molecular recognition layer selectively
capture molecular of certain chemical substances.

2. The molecular recognition type chemical CCD
15 according to claim 1, wherein the molecular recognition layer
is formed by a molecule imprinting method in which a host
polymeric resin and a guest substance to be measured are
complexed and polymerized, and said guest substance is then
removed to form a mold having a cavity in a portion of the host
20 polymeric resin where the guest substance was present.

3. The molecular recognition type chemical CCD
according to claim 1, wherein the molecular recognition layer
comprises a DNA complementary to a DNA to be measured.

4. The molecular recognition type chemical CCD according to any of claims 1 to 3, wherein a gel having a solution containing a substance to be measured mixed into a gel material for migration is provided on an upper surface of the molecular recognition layer and a DC voltage is applied to the gel to measure the substance to be measured in the gel which is obtained after electrophoresis.